Abstract of the Disclosure

Signal conditioning of multiple sense elements is shown for providing information to a system requiring high accuracy and robust fault coverage. A first signal conditioning ASIC (10) pre-conditions the sense element data and a second system control ASIC (14) mathematically solves predetermined compensation relations based on the output of ASIC (10) and stored compensation data to fully condition the sensor output signal(s). The sense elements (1-6) are each formed by two half bridges whose inputs are pre-conditioned by separate, identical signal conditioning paths to provide highly accurate sense and diagnostic information.